# Meeting President Bush's
# Climate Change Challenge to Business and Industry

*"To achieve this goal, our nation must move forward on many fronts, looking at every sector of our economy. We will challenge American businesses to further reduce emissions.... We will build on these successes with new agreements and greater reductions."*

-- President George W. Bush, February 14, 2002

On February 14, 2002, President Bush announced a new strategy to address the long-term challenge of global climate change. He committed to reducing America's greenhouse gas intensity – the ratio of emissions to economic output – by 18% in the next decade, and challenged American businesses and industries to undertake broader efforts to help meet that goal. Today, Secretary of Energy Spencer Abraham, Environmental Protection Agency Administrator Christine Todd Whitman, Sectary of Agriculture Ann Veneman, Deputy Secretary of Transportation Michael Jackson, and White House Council on Environmental Quality Chairman James Connaughton recognized the significant initiatives that major, energy-intensive sectors of the American economy are undertaking to meet the President's challenge. These initiatives build upon the progress made by the industrial sector in the past decade; from 1990 – 2001, while the economy grew by almost 40 %, greenhouse gas emissions in the industrial sector were constant.

## Meeting the Challenge Across America's Largest Companies

- The Business Roundtable's (BRT) Climate RESOLVE (Responsible Environmental Steps, Opportunities to Lead by Voluntary Efforts) initiative will mobilize the resources and expertise of its 150 member companies to enhance their voluntary actions to reduce the greenhouse gas intensity of the American economy. The BRT has committed to achieving 100% participation of its members in initiatives to reduce, avoid, offset or sequester emissions. These companies collectively generate one-third of the United States' Gross Domestic Product.

- Climate RESOLVE is the only initiative that reaches across industries and sectors to encourage voluntary efforts to manage greenhouse gas emissions by many of the nation's largest companies. In June 2004, the BRT will release its first annual public report on accomplishments under the program and additional measures planned for future years. The BRT will monitor the activities of its members and report on progress toward its goal of 100% participation, continuing through 2012. Climate RESOLVE's philosophy is that "voluntary actions are the best way to deliver continued economic growth while minimizing the risks of climate change."

## Meeting the Challenge in the Energy Sector

Oil and Gas Production, Transportation and Refining

- American Petroleum Institute (API) whose members represent over 60% of U.S. petroleum refining capacity, is committed to increasing aggregate energy efficiency of members' U.S. refinery operations by 10% from 2002 to 2012. This goal will be met through reduced gas flaring and other energy efficiency improvements, expanded combined heat and power facilities, increased by-product utilization, and reduced carbon dioxide venting. API will also aim for 100% participation in EPA's Natural Gas Star program and in federal Combined Heat and Power (CHP) programs. API members will develop greenhouse gas management plans to identify and pursue opportunities to further reduce emissions.

Electricity Generation

- Edison Electric Institute (EEI) and six other power sector groups, representing 100% of U.S. electricity generation, formed the Electric Power Industry Climate Initiative (or EPICI) to reduce the sector's carbon intensity. Other EPICI members include the National Rural Electric Cooperative Association, the Nuclear Energy Institute, the American Public Power Association, the Large Public Power Council, the Electric Power Supply Association, and the Tennessee Valley Authority. By May of this year, a formal memorandum of understanding between EPICI and DOE will be signed and it will pledge the industry to reduce the power sector's carbon impact in this decade by the equivalent of 3% to 5%, through increased natural gas and clean coal technology, increased nuclear generation, offsets, and expanded investment in wind and biomass projects.

  Expected initiatives include reforestation in the lower Mississippi River valley (UtiliTree II), increased use of coal combustion byproducts (C2P2), and expanded use of wind and biomass (Harvesting the Wind, etc.). The Edison Electric Institute is also working with DOE to develop the Power Partners Resource Guide, a Web-based tool to help companies reduce greenhouse gas emissions intensity.

- Nuclear Energy Institute (NEI) has identified the potential to expand nuclear power generation to displace growth in sources that emit greenhouse gas emissions. Capacity of six - eight gigawatts can be added by power uprating, in addition to those uprates already identified by the Nuclear Regulatory Commission. Productivity of existing plants can be improved to add the equivalent of another three - five gigawatts of capacity. Re-starting nuclear powerplants, such as the TVA Brown's Ferry plant, could add more than one gigawatt. Full use of existing facilities could increase nuclear power capacity by 10 gigawatts, or 10% of existing nuclear capacity, and would avoid the emissions of approximately 22 million metric tons of carbon equivalent in 2012.

- National Rural Electric Cooperative Association (NRECA) represents operators serving 36 million people in 47 states, and participates in Power Partners to develop renewable sources, landfill and agricultural methane uses, and bio-fuels. NRECA is also participating in the effort to find "near-zero emission" technologies. Other efforts include improved load management to cut peak demands and line-loss research to increase distribution efficiency over the members' extended distribution lines.

- American Public Power Association (APPA) and Large Public Power Council (LPPC) members provide electric power to more than 40 million Americans, and pledge their efforts to expand generation from renewable sources. Specifically, members will increase utilization of existing hydro-electric capacity to meet western power needs, will increase generation from wind projects and landfill gas, and implement "green pricing" to increase incentives for production by low emission technologies. Where coal generation is used, APPA members pledge to increase generation efficiencies by four to eight percent under enabling revisions to the Clean Air Act.

- Electric Power Supply Association (EPSA) members supply electricity to competitive markets and provide a large share of new, low-emission electricity capacity. EPSA members pledge to increase their average capacity factor from the current 40 percent projected in 2012 to 44 percent.

Coal Production and Mining

- National Mining Association (NMA) representing producers of 70% of the nation's primary electricity fuels, is committed to achieving a 10% increase in the efficiency of those systems that can be further optimized with processes and techniques developed by DOE and made available through the pending NMA-DOE Allied Partnership. The commitment includes steps to recover additional coalmine methane, expansion of land reclamation and carbon sequestration efforts and coal and mining research. For example, technology developed through DOE partnerships is projected to further reduce greenhouse gas emissions by one million metric tons annually by, 2012.

**Meeting the Challenge in the Manufacturing Sector**

- Portland Cement Association (PCA) in cooperation with the Department of Energy and the Environmental Protection Agency, has committed to reduce carbon dioxide emissions by 10% per ton of cement from a 1990 baseline by 2020. The Association and its members who represent more than 95% of US cement production have adopted a three part program to achieve the goal that focuses on enhancements to the production process, the product itself and how the product is applied.

- American Iron and Steel Institute (AISI) 33 member firms, representing nearly three-quarters of the nation's steel-producing capacity, have committed to achieving a 10%

increase in sector-wide average energy efficiency by 2012 from 1998 levels. The improvements will come both in steelmaking efficiency and industry restructuring. In addition, the industry will continue to produce new steel products that enable efficiency gains to industry customers.

- Semiconductor Industry Association (SIA) in partnership with the Environmental Protection Agency, has committed to reduce a suite of the most potent greenhouse gas emissions by 10% from 1995 levels by the end of 2010. The SIA agrees to this goal on behalf of 22 semiconductor manufacturers that account for over 70% of this sector's HFC, PFC and SF6 "perfluorocompound" emissions. EPA estimates that this goal will reduce emissions by over 13.5 MMTCE in the year 2010, or the equivalent of eliminating greenhouse gas emissions from 9.6 million cars. Perfluorocompounds are among the most potent and persistent of all global warming gases and are used to clean semiconductor manufacturing equipment and to etch silicon wafers to create circuitry patterns. These perfluorocompounds have, on average, 10,000 times the global warming potential of carbon dioxide over 100 years, plus, they can persist in the atmosphere from 2,000 to 50,000 years. Launched in 1996, this partnership has catalyzed global industry efforts by the World Semiconductor Council and other semiconductor trade associations to reduce greenhouse gas emissions worldwide. Semiconductors manage electronic information in a wide variety of products such as computers and cell phones.

- Magnesium Coalition and the International Magnesium Association. Partner companies in the Environmental Protection Agency's SF6 Emission Reduction Partnership for the Magnesium Industry have committed to eliminate sulfur hexafluoride (SF6) emissions from their magnesium operations by 2010. SF6 is the most potent greenhouse gas known today; more than 23,000 times as strong as the most common man-made greenhouse gas, carbon dioxide. The partner companies committed to eliminating SF6 emissions represent 100% of U.S. primary magnesium production and approximately 80% of U.S. magnesium casting and recycling. The industry's action will reduce overall U.S. SF6 emissions in 2010 by an estimated 20% and will have a climate benefit equivalent to eliminating greenhouse gas emissions from more than one million cars.

- American Chemistry Council (ACC), representing 90% of the chemical industry production in the U.S., has agreed to an overall greenhouse gas intensity reduction target of 18% by 2012 from 1990 levels. ACC will measure progress based on data collected directly from its members. The ACC also pledges to support the search for new products and pursue innovations that help other industries and sectors achieve the President's goal. Activities include increased production efficiencies, promoting coal gasification technology, increasing bio-based processes, and, most importantly, developing efficiency-enabling products for use in other sectors, such as appliance transportation and construction.

- Aluminum Association, in partnership with the Environmental Protection Agency, has committed to reduce sector-wide greenhouse gas emissions. Through one of the

first voluntary partnerships with EPA in 1995, the Voluntary Aluminum Industry Partnership (VAIP) reduced perfluorocarbon (PFC) emissions in 2000 by over 45% compared to 1990 levels. The VAIP has committed to further reduce PFC emissions by 2005. This year the industry will collaborate with EPA to identify additional greenhouse reductions for multi-gas voluntary reductions. This broadened commitment will enable the industry to make additional reductions through multiple pathways such as energy efficiency and recycling in the most cost-effective and efficient manner.

## Meeting the Challenge in the Transportation Sector

Railroads

- The Association of American Railroads (AAR) in consultation with the Department of Transportation, the AAR has committed to reducing the transportation-related greenhouse gas intensity of their Class 1railroads by 18% in the next decade. In 1980, a gallon of diesel fuel moved one ton of freight an average of 235 miles; in 2001, railroads were able to move one ton of freight an average of 406 miles on a single gallon of fuel. In 2001 alone, this improvement saved 2.6 billion gallons of diesel fuel, preventing 30 million tons of carbon dioxide emissions. In the future, railroads will aggressively pursue innovative ways to reduce fuel consumption and greenhouse gas emissions.

Automobiles

- Alliance of Automobile Manufacturers (AAM) whose members account for over 90% of U.S. vehicle sales, has agreed to reduce greenhouse gas emissions from its members' manufacturing facilities by at least 10% by 2012, based on U.S. vehicle production from a 2002 baseline. Activities toward this goal include installing energy efficient lighting, converting facilities' coal and oil power sources to cleaner natural gas, and upgrading ventilation systems. Moreover, research partnerships between DOE and some Alliance members, such as for FreedomCAR, are accelerating the development of inherently clean fuel cell technology.

## Meeting the Challenge in the Forest Sector

- American Forest and Paper Association (AF&PA) in consultation with the United States Department of Agriculture, is committed to actions to meet the President's greenhouse gas intensity reduction goal. AF&PA members expect to reduce their greenhouse gas intensity by 12% by 2012 relative to 2000. Specific actions include the enrollment of 114 million acres in the Sustainable Forestry Initiative program, the largest sustainable forestry program in the world. AF&PA members also have a strong commitment to recycling and expect fiber recovery rates of at least 50%, avoiding methane emissions in landfills and increasing carbon storage. The industry will continue to lead all manufacturing sectors in on site electricity generation,

deriving over half of its energy needs from renewable energy and biofuels and in many cases supplying supplemental electricity to the surrounding power grid.